

**METHOD FOR ENHANCING RNA OR PROTEIN PRODUCTION USING
NON-NATIVE 5' UNTRANSLATED SEQUENCES IN RECOMBINANT
VIRAL NUCLEIC ACIDS**

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ABSTRACT

The present invention provides a method for enhancing the production of
RNAs or proteins in a plant host using either non-native 5' untranslated sequences or
artificial leader sequences. Preferably, commercially useful proteins, polypeptides, or
fusion products thereof are produced, such as, enzymes, antibodies, hormones,
10 pharmaceuticals, vaccines, pigments, anti-microbial polypeptides, and the like. The
non-native 5' untranslated enhancers may also be effective in many different types of
transcription or translation systems, such as bacterial and animal systems.